

Amendments to the Claims:

Claims 1-36 (canceled)

Claim 37. (original) A method for growing a light emitting diode having an internal disperser layer to enhance light extraction, comprising:

- placing a substrate in a reactor for growing semiconductor materials;

- growing a first semiconductor layer on said substrate, said first layer having a rough surface;

- stopping growth of said semiconductor layer;

- growing a disperser layer of semiconductor material on said roughened layer, said disperser layer having a different index of refraction than said first layer;

- growing a second layer on said disperser layer, said second layer having a similar index of refraction as said first layer;
- and

- growing a semiconductor light emitting structure on said second layer.

Claim 38. (original) The method of claim 37, wherein said light emitting diode is AlInGa_N based and said first layer is grown rough by increasing the flow of disilane, changing the flow of ammonia, or increasing the rate that said first layer is grown.

Claim 39. (original) The method of claim 37, wherein said light emitting diode has a first spreading layer and said disperser layer is grown within said spreading layer.

Claim 40. (original) A method for manufacturing an AlInGa_N light emitting diode with an internal disperser layer to

Appl. No. (Not yet assigned)
Amdt. Dated September 17, 2003
Preliminary Amendment in Divisional Application

enhance light extraction, comprising:

placing a substrate in a reactor for growing semiconductor materials;

growing uncoalesced islands of material made of $\text{Al}_x\text{In}_y\text{Ga}_{1-x-y}\text{N}$, $0 \leq x \leq 1$, $0 \leq y \leq 1$, on said substrate;

stopping the growth of islands;

depositing a disperser layer on said uncoalesced islands, said disperser layer having a different index of refraction from said highly doped GaN material;

growing a layer of material made of $\text{Al}_x\text{In}_y\text{Ga}_{1-x-y}\text{N}$, $0 \leq x \leq 1$, $0 \leq y \leq 1$, on said disperser layer, said layer having a smooth surface; and

growing a light emitting structure on said layer.